Nutrition News

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IMPROVED CHILD NUTRITION

By JULIAN D. BOYD, M. D.
Department of Pediatrics
The State University of Iowa

Much is to be gained through a sane application of current knowledge concerning nutrition. Certain facts stand firmly established. We know, for example, that the body to function normally has need for a variety of nutrients of diverse nature. Desirable standards for nutrition should be directed toward the attainment of the optimum response: a diet should not be considered fully adequate unless it supplies to the child everything that food can contribute toward the long range advancement of the individual's well-being.

For current use, the recommendations of the Food and Nutrition Board of the National Research Council may be accepted as a valid guide in designing the nutritional regimen of the child.

The requisites recommended by this Council can be provided in various ways. In view of the exploitation of pharmaceutical products for furtherance of nutrition, it is refreshing to discover that all the elements of a complete diet can be provided in adequate amounts solely through the use of simple foodstuffs, if one properly includes fish liver oil among the foods.

It is important to note that in recommended diets for a child some foods contribute to many different essentials, whereas others serve only specific purposes. The heaviest contributor to all categories is milk. One quart of milk a day can meet the whole requirement for calcium and for riboflavin. Moreover, it contributes more heavily than any other single protective foodstuff to the provision of the day's quota of calories, protein, and thiamine. If the amount of milk intake were reduced much below the prescribed level (one quart a day), there would be likelihood of diet impoverishment in the specified categories. Full substitution for the omitted milk would not be easy, inasmuch as a variety of foodstuffs would be required to meet the incurred deficit in its entirety.

Evidence of Nutrition Status

Dental records of our subjects have offered the most tangible evidence of the benefits of diet supervision. The protection of teeth against decay has been seen in children with different disease entities and without disease, under widely different types of menus but under regimens of comparable nutritional worth. In all groups, the foremost variable in the degree of caries control has been the constancy with which the prescribed dietary regimen has been followed.

We have good evidence that the incidence and rate of progression of tooth decay in a large group of children have been reduced to a negligible level and the teeth have been maintained in that status for periods of years. Large numbers of children have approached maturity with teeth free from caries. Further, there seems little room for doubt that the nature of the children's diets was the responsible agent. Here we have a tool which, if properly employed, offers promise of abolishing tooth decay, the commonest disease affecting civilized mankind.

The great prevalence of caries in the child population can be accepted as evidence that prevalent dietaries are not of the type or degree of excellence necessary to protect teeth from decay. Surely the evidence for prevalent substandard dietaries among the general child population is a cause for serious concern.

Doctor Boyd

It is not enough for the physician or dentist to tell the parent that a child should have a "good, well-balanced diet". Neither is it enough to specify that the child shall have "lots of milk, meat, eggs, vegetables, and fruit." To talk in terms of needs for vitamins or minerals to the average parent will result only in confusion. To bolster the diet regimen with pharmaceutical products is inadequate and unsound. Every child deserves to have special attention directed toward his diet. Each physician and dentist should recognize the importance of proper diet guidance.

Essentially the matter of betterment of diet practices is one of education. Lack of insight and of knowledge regarding nutrition must be remedied.

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AT NUTRITION RESEARCH

Minerals constitute one of the groups of essential nutrients. Calcium and phosphorus, a major source of which is milk, claim a position of outstanding importance. The following reviews represent some of the latest research on these two elements.

Mineral and Protein Metabolism — An increase in animal protein (milk, eggs, and meat) in the diet of pre-school children apparently gives rise to an increase in soft tissue growth. This inference was derived from the observation of an increase in phosphorus utilization accompanying an increase in body weight when the protein intake was raised from 3 to 4 gm. per Kg. Furthermore, the high nitrogen/phosphorus ratio indicated that a tissue rich in nitrogen was being manufactured. The weight gain was not due to enhanced calcification since the utilization of calcium was not altered in any way. There was, however, an increased retention of water but not enough to account for the gain in body weight.

—J. Nut. 24:283 (Sept.) 1942.

Calcium - Phosphorus Metabolism — Premature infants are born with a greater need for calcium than are full term infants. The calcium and phosphorus retention percentages observed, when cow's milk was fed, were 71 and 61, respectively; these values are much higher than the 30 and 27 per cent figures reported for full term infants. The great discrepancy between these two sets of figures indicates a marked mineral deficit at birth; such a conclusion is logical since most of fetal calcification takes place during the last two months of normal pregnancy. Calcium and phosphorus requirements of full term infants would seem to be much lower than those of premature infants. It is possible that human milk cannot adequately supply this mineral need; considerably more calcium was retained when cow's milk was fed.

—Am. J. Dis. Child. 65:412 (Mar.) 1943.

Calcium for Longer Life—The life of experimental rats has been extended approximately 8 per cent by raising the calcium level in their food 75 per cent. Furthermore, the rats receiving diets containing the higher amounts of calcium produced and reared larger and healthier litters than those receiving less calcium. An increase of life expectancy did not occur, however, in female animals which had been permitted to reproduce frequently. This difference was shown to be due to the additional demands of pregnancy and lactation; unmated female rats on high calcium intakes lived just as long as did the male animals. On the lower calcium intake 31 per cent of these animals lived at least 900 days; when the calcium was increased, 45 per cent survived that length of time.

—J. Nut. 26:323 (Sept.) 1943.

Calcium in Pregnancy and Lactation—Calcium has been shown to be essential to successful pregnancy and lactation in rats. Animals which previously had demonstrated fertility on a normal diet were transferred to a diet extremely low in calcium. These experimental rats produced few healthy young and were incapable of providing enough milk to allow for normal growth and calcification of these offspring. Furthermore, animals which had received a calcium-poor ration (containing only 10 mgm. of calcium per 100 gms. food) since weaning time completely failed to reproduce. This reproductive failure apparently was due to sexual immaturity even though the animals had attained adult age.

—J. Nut. 26:105 (Aug.) 1943.

TIMELY TOPICS

Dr. Boyd

Dr. Julian D. Boyd, author of the leading article in this issue is Professor of Pediatrics, The State University of Iowa. He has made long range studies of many children especially planned to show the relationship between the regimen of diet and the pattern of dental caries. Detailed reports of his research work are available in current issues of professional magazines.

FDA Re-organization

The Nutrition and Food Conservation Branch of the FDA is now known as the Nutrition Programs Branch and will continue to carry on the activities of the Nutrition Division as advisory agency for community nutrition committees. The other divisions of the Nutrition and Food Conservation Branch are re-located in the Civilian Food Requirements Branch and Marketing Reports Division of FDA. Activities of all of these divisions will be continued, as the primary change is in organization rather than activity.

Dairy Products

Government authorities and the dairy industry have inaugurated plans —and are making further plans—to promote increased production of dairy products and to distribute fairly whatever quantity is available. Dairy products are in demand for civilian, military, lend-lease, and a variety of special needs. The amounts available to each group vary with the demands of other groups and with seasonal production changes.

FOOD SAVING — A PROGRAM FOR 1944

By Ben James, Marketing Reports Division, Food Distribution Administration, Washington, D. C.

The National Food Conservation Campaign has two objectives—to appeal for the utmost care in food handling, preparation, and serving, and to give information on nutritive values and appetizing preparation of "new" foods. Nutritionists have important roles to play in helping to reach both of these objectives.

The Food Conservation activities were recently transferred from the Nutrition and Food Conservation Branch to the Marketing Reports Division of the Food Distribution Administration. These activities are directed to the promotion of programs of conservation of food through many groups and via many channels.

To secure the widest possible public participation, Clean Plate Clubs are sponsored through community-wide committees, school food conservation projects have been developed, national men's and women's organizations have been enlisted, and widespread publicity campaigns have been instituted using the radio, press, magazines, volunteer public speakers, and national advertisers.

Every person and organization interested in increasing our food supply is invited to participate in combating waste by:

1. Forming, joining, and promoting Clean Plate Clubs.
2. Encouraging and helping the school food conservation program.
3. Studying and disseminating information on how to conserve food.
4. Helping to harvest crops, canning and drying the produce from Victory Gardens, and using foods that are abundant in place of those that are scarce.

Materials summarizing the facts on food waste and serving as guides for group discussions, public speakers, school projects, and community organizations have been prepared by the Food Distribution Administration.

Fight Food Waste

In pre-war days a Polish peasant who saw a bit of wasted food lying by the wayside would utter a prayer for forgiveness to God, the Giver of all food, for having even observed such waste, and would then place the morsel on a stone where it could readily be found by birds or animals. Today if he were lucky enough to make such a find he would either eat it himself or carry it home to share with his wife and children. The grim fact is that ours is the only country in the world that tolerates full garbage cans.

No one likes to admit responsibility for wasting food — yet the garbage cans keep filling up. A careful study made in 1938 by the American Public Works Association showed a per capita annual wastage of 234 pounds of food products—much of it edible. A preliminary check of 1943 figures shows a decline, perhaps to 180 pounds per capita, but still too high.

For the American homemaker the extent and significance of her food wastage are hidden by the fact that it is an established, normal process which has gone on for as long as she can remember. She has no standard of exacting frugality by which to judge her food habits. She has not grown up, as Europeans have, with a stock pot in every kitchen to catch all the scraps and scrapings which we unquestioningly drop into the refuse pail.

The frequently heard comment "We always try to set a good table" is no evidence of nutritious meals. On many "good tables" nutritive values have been peeled, trimmed, shrunk, and refined away.

Study of the data indicates that the food waste occurs in two ways: food carelessly or deliberately thrown away, and losses from unused edible foods, such as apple parings and outer leaves of cabbage.

TIME TO EVALUATE INDUSTRIAL NUTRITION PROGRAMS

By Charles P. Alcorn, Industrial Nutritionist, Food Distribution Administration, Midwest Region, Chicago

Changing the food habits of the adult is a long and difficult task. Many local Nutrition Committees are expending great effort in varied types of educational programs to change these habits. The time has now arrived when we should evaluate the effectiveness of these efforts so that we can plan our future approach on a level that reaches those people not yet influenced by our programs.

Two well-functioning community programs have been analyzed to determine how successful the activities of the Nutrition Committees have been. Some of the facts learned from this study are briefly reviewed here to assist Nutrition Committees in developing stronger programs.

Fundamentally a program based upon personal contacts between the industrial worker and those promoting the program is of the most value. Printed material keyed to the level of the worker is of importance in such a program—particularly if it is carefully introduced and worked into the various activities of the program. Tangible incentives for selecting good food are of real value in producing results. Other specific points brought out in the survey of these industrial programs are as follows:

Workers need to recognize that health is a relative condition. The major obstacle to the eating of an adequate diet by workers is their apparent satisfaction with their present inadequate diets. Unless serious illness results from specific food habits, many workers feel that they are properly fed and that there is no need to alter these habits. Some workers believe health is a "100 per cent or zero" condition. They do not understand the relationship of diet to fatigue or lack of resistance.

Interesting the worker in better nutrition may well be approached along lines that he understands. Constipation, skin eruption, excess weight, dental decay, and other disorders are subject to dietary influence and should be represented as such. Often workers cannot recognize fatigue in themselves, it has become so habitual. However, workers are generally acquainted with the idea that food gives energy, which helps prevent fatigue. Educational methods should expand this concept

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DID YOU KNOW ?

—that one quart of milk furnishes about one half of the daily protein need of a normal adult and one third or more of the daily need of a normal growing child over 12 years of age?

—that the practical utility of pine-needle tea as a source of vitamin C, the scurvy-preventer, has been announced by Russian botanists?

—that one ounce of hard cheese furnishes one third of an adult's daily need for calcium?

—that each person consumes, on the average, the equivalent of 390 quarts of milk each year—including fluid milk and cream, butter, cheese, ice cream, and concentrated milks?

—that Hippocrates, father of medicine, prescribed milk for health in 360 B.C.?

—that the American soybean crop this year will yield approximately 209 million bushels, most of which, because of its high nutritive value, will go into human and stock food?

—that available evidence seems to indicate that the calcium of milk is better utilized by the body than the calcium from other food sources?

—that everyone needs riboflavin — for growth and to aid in the process of burning food in the body?

THINGS YOU'LL LIKE TO READ

THE SCIENCE OF NUTRITION — Henry C. Sherman. Columbia University Press, 1943. $2.75.

In this book Dr. Sherman gives his philosophy of nutrition as he summarizes present nutrition information. He points out pertinent historical facts in the field of nutrition research. He further presents means of making this knowledge more effective — ways of contributing to nutrition improvement.

1943 Food Conservation Publications of the War Food Administration, available as a Conservation Kit, from the Food Distribution Administration, Washington 25, D. C. Free.

Discussion Guide on Food Conservation for use by Women's Groups.

Facts on Food Waste—news release.

Fight Food Waste in the Home—leaflet for the consumer.

Food Conservation—A Cooperative Job for all Teachers and Pupils—suggestions for school activities.

Information for Public Speakers on Food Waste.

THE INDUSTRIAL CAFETERIA AND RESTAURANT WORKER'S MANUAL — Milton A. Rosenfeld. National Foremen's Institute Inc., 1943. $1.35.

Helpful suggestions and timely tips for cafeteria and restaurant managers are presented in clear, concise form. The importance of selection of food for the meals and protection of food values is emphasized as the author gives the fundamentals of proper serving of meals to keep workers healthy.

NUTRITION EDUCATION IN THE ELEMENTARY SCHOOL—U. S. Office of Education and Food Distribution Administration. Government Printing Office, 1943. 15 cents.

This practical informative guide is directed to elementary school teachers, elementary supervisors of public schools, and state educational agencies. It includes specific suggestions for classroom activities plus helpful hints with regard to promotion and organization of nutrition activities.

TIME TO EVALUATE INDUSTRIAL NUTRITION PROGRAMS

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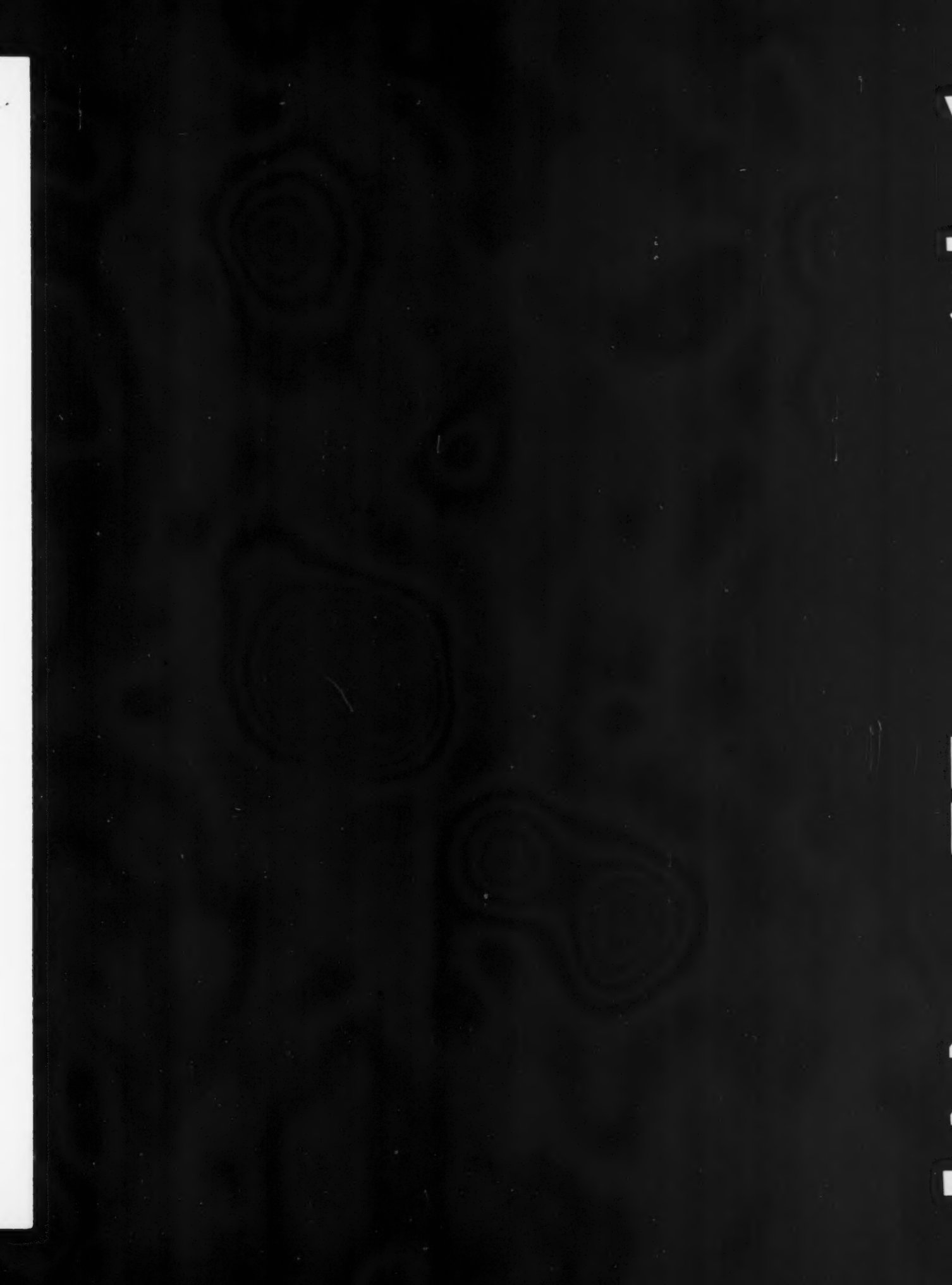
into the understanding that optimal energy depends upon optimal diet.

The possibility of improving an apparently satisfactory condition of health may be illustrated through the use of analogies from the army or sports. Workers recognize the fact that army recruits are generally in good health when they are inducted, but they also recognize that army life, including a well-balanced diet, gives the soldier greater vitality and resistance to disease.

The contributions of different food groups need to be separately identified. Most workers do not understand that there are different food nutrients. They are quite unaware of the fact that a diet which satisfies the appetite may lead to serious vitamin-deficiency diseases.

Balanced meals must be freed of the odium of "tea-room" meals. So far as workers are concerned, nutrition education suffers from being identified with women demonstrators, women's meetings, and women's lunches. To many workers, "nutrition" means a light "fancy" meal — all right for women or office workers, but definitely not suitable for men doing hard work. Workers need to understand that nutritionists do not propose to take their meat and potatoes away from them. The emphasis should be placed on the value of these foods and supplementing them with additional foods.

Any implication that nutrition is for the "fashionable set" should be avoided. This identification is unfortunately already common among working people. Public programs of nutrition education have drawn audiences for the most part from middle income groups and have commonly been pitched to their level. Working people are accustomed to simple food and they are not much attracted by the idea of decorative or unusual foods. Instruction as to the "interesting" grouping of different colored foods on the plate or the preparation of unusual dishes of which the only virtue is variety, only confirms the working person's belief that nutrition is not for him. Working people must be approached on their own terms.